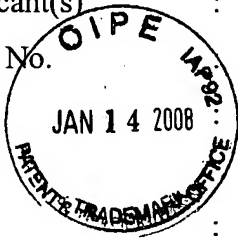


**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant(s) : Alan L. Billings  
Serial No. : 10/720,489  
For : METAL SPIRAL FABRICS FOR CORRUGATOR  
MACHINES  
Filed : November 24, 2003  
Examiner : Charles, Marcus  
Art Unit : 3682  
Confirmation No. : 4548



745 Fifth Avenue  
New York, NY 10151  
January 9, 2008

**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

Claims 1, 3, 5, 7-12 are pending in this application. Claims 1, 3, 5, 7-12 are rejected in the Final Office Action mailed August 9, 2007 (the "Office Action").

**I. REASONS FOR THE REQUEST**

Applicant respectfully requests the Panel to consider the following arguments.

**(a) Claim rejections under 35 U.S.C. § 103(a)**

Claims 1, 5 and 10 were rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over U.S. Patent No. 6,932,756 to Franchi (hereinafter merely "Franchi") in view of Japanese Patent JP 4024298 (hereinafter merely "JP '298") and further in view of Japanese Patent JP 10-292252 (hereinafter merely "JP '252").

It is respectfully submitted that the present claims are patentable over the applied references for at least the following reasons.

**A. Cited references do not teach all claim recitations**

Independent claim 1 recites, *inter alia*:

“A belt for use on a corrugator machine in the manufacture of corrugated packaging board, said belt comprising:  
an endless spiral-link base, said base defining a top surface and a bottom surface and including a plurality of metal spirals, each spiral defining an internal space, wherein the spirals are interconnected by a series of parallel pintles extending through the internal spaces of adjacent spirals,  
wherein the belt is a singlefacer belt.” (Emphasis added)

Accordingly, one embodiment of the instant invention relates to a belt for use on a corrugator machine in the manufacture of corrugated packaging board, having an endless spiral-link base and including a plurality of metal spirals.

It is submitted that none of the cited references, considered either alone or in combination, teach or suggest the above identified feature of claim 1. Specifically, none of the cited references, considered either alone or in combination, disclose or suggest using an endless spiral-link base made of metal spirals in a corrugator machine in the manufacture of corrugated packaging board, as recited in claim 1.

**B. References Cannot Be Combined Because Reference Teaches Away from Their Combination**

As understood by the Applicant, Franchi relates to a continuous corrugator belt for supporting/conveying a sheet of cardboard, defined by a mat of multispiral fabric preferably made of synthetic polymer fibers.

Franchi specifically teaches that felts or conventional fabrics are relatively heavy and therefore difficult to assemble onto the machine; the weight, combined with a high friction coefficient, of such materials increases the energy consumption of the machine. (Col. 1, 37 - 44, Col. 2, 32-47). Therefore, one of Franchi's main objectives is to reduce the friction coefficient by reducing the weight of the belt and eventually reducing energy consumption.

JP'298, on the contrary, is teaching away from Franchi in that both the spiral wiry materials (2a) and the connecting wiry materials (2b) are preferably formed from a metal, and since the whole belt in JP'298 is formed of wiry materials, it is certainly going to increase the weight of the belt, thus increasing the friction coefficient and energy consumption.

Additionally, while Franchi relates to corrugator belts, JP'298 relates purely to a coated shoe press belt. There is no teaching or suggestion for use of metal spirals in Franchi. Quite contrarily, Franchi avoids using any heavy materials for the spirals in order to avoid any

weight on the belt. As to JP'252, it merely teaches a corrugating machine. Although JP'252 mentions single facer and double backer belts, there is no suggestion for using metal spiral coils, or even spiral coils for that matter. Therefore, it is not obvious for one of ordinary skill in the art to modify the teachings of Franchi in view of JP'298 and/or JP'252. Specifically, it is non-obvious for a skilled artisan to use metal spirals in Franchi's belt, when the primary reference, Franchi itself teaches away from the combination.

MPEP §2145(X)(d) states:

**"It is improper to combine references where the references teach away from their combination. *In re Grasselli*, 713 F.2d 731, 743, 218 USPQ 769, 779 (Fed. Cir. 1983) (The claimed catalyst which contained both iron and an alkali metal was not suggested by the combination of a reference which taught the interchangeability of antimony and alkali metal with the same beneficial result, combined with a reference expressly excluding antimony from, and adding iron to, a catalyst.)"** (Emphasis added)

The motivation or teaching to make the claimed combination by modifying or combining prior art references must be found in the prior art and not in the Applicant's disclosure. *In re Vaeck*, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). There is nothing that would motivate a skilled worker in the art to modify the teachings of Franchi in view of JP'298 or JP'252, when Franchi lacks the very motivation to do so.

**C. Impermissible hindsight reasoning and mosaic reconstruction**

It is further submitted that *impermissible hindsight* reconstruction of the claimed invention using elements of the prior art is *not* allowed under 35 U.S.C. §103 (see MPEP §2142 for a discussion of impermissible hindsight).

Furthermore, MPEP §2143.01(III) states:

**"The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990)"**  
(Emphasis in original)

It is respectfully submitted that the Office Action has merely created a mosaic of features from the prior art, without either a clear suggestion of the desirability of the combination.

Additionally, MPEP §2143.01(IV) states:

A statement that modifications of the prior art to meet the claimed invention would have been "well within the ordinary skill of the art at the time the claimed invention was made" because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993). (Emphasis added)

As noted above, the Office Action has merely provided references to teach individual aspects of the claimed invention in total isolation, and has not established a *prima facie* case of obvious. The Office Action has failed to provide an objective reason to *combine* the disparate and unrelated teachings of the references into the claimed combination. Therefore, it is submitted that the combination of references is inappropriate, and the withdrawal of the rejections is respectfully requested.

Additionally, the Examiner has not shown sufficient obviousness reason for a person of ordinary skill in the art to combine the teachings of Franchi with JP '298 or JP '252. There is no suggestion in Franchi for using any material other than a synthetic polymeric fiber, because Franchi's intention is to produce a low weight multispiral fabric. In fact, Franchi discloses that he does not intend to increase the weight of the fabric. The Examiner uses metal spirals of JP'298 in Franchi to show low elongation, dimensional regulation and excellent durability. However, using metal spirals in Franchi's fabric would defeat his prime objective of keeping the fabric weight low. As to JP'252, there is absolutely no suggestion of using a metal-spiral belt on the machine. Therefore, there is no connecting link between Franchi and JP '252.

For at least the foregoing reasons, it is submitted that independent claim 1 patentably distinguishes over the cited references. Since independent claims 5 and 10 are similar in scope to claim 1, they are also patentable.

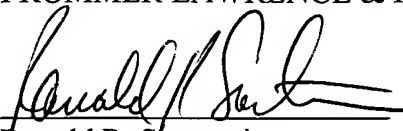
Since the other claims are each dependent from one of the independent claims discussed above, they are also patentable for at least the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

**CONCLUSION**

In view of the foregoing remarks, all of the claims in this application are patentable and Applicant respectfully requests early passage to issue of the present application.

Respectfully submitted,  
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